

REMARKS

Applicant will address each of the Examiner's rejections in the order in which they appear in the Office Action.

Claim Rejections - 35 USC §112

In the Office Action, the Examiner rejects claim 18 under 35 USC §112 first paragraph as failing to comply with the written description requirement. This rejection is respectfully traversed.

While Applicant traverses this rejection (and do not know which limitations the Examiner is objecting to), in order to advance the prosecution of this application, Applicant is canceling Claim 18 without prejudice or disclaimer. Accordingly, it is respectfully requested that this rejection be withdrawn.

Claim Rejections - 35 USC §103

Claims 15 and 16

The Examiner also rejects Claims 15 and 16 under 35 USC §103(a) as being unpatentable over Japanese Patent Specification No. 52-052256. This rejection is also respectfully traversed.

More specifically, Japanese Patent Specification No. 52-052256 describes a coolant consisting of sodium nitrate as a main component and a low quantity of sodium chloride and ammonium chloride which are 1/2-1/9 of the main component. In contrast, Claims 15 and 16 are directed to a cold storage agent wherein potassium chloride or sodium chloride (Claim 15) or ammonium chloride (Claim 16) are the main component. Since the major component of JP '256 is sodium nitrate, the compound in the reference is quite different from the agent of Claims 15-16.

In addition, JP '256 describes that its effect lies in decreasing volume expanding when frozen.

Therefore, it is respectfully submitted that Claims 15 and 16 are not disclosed or suggested by the cited reference and are patentable thereover. Accordingly, it is respectfully requested that this rejection be withdrawn.

Claim 16

The Examiner also rejects Claim 16 under 35 USC §103(a) as being unpatentable over Japanese Patent Specification No. 55-161878. This rejection is also respectfully traversed.

Japanese Patent Specification No. 55-161878 describes a cooling mixture, which consists of urea, potassium chloride and ammonium chloride. With the described compound, after an appropriate amount of water is mixed with the mixture salts, temperature depression takes place. The nature of this phenomenon is very different from the agent of Claim 16. The agent of Claim 16 utilizes latent heat of frozen materials. Hence, one skilled in the art would not look to this reference to arrive at the cold storage agent of the claimed invention. There is no motivation for one skilled in the art to review this reference, and no such motivation has been provided by the Examiner, other than hindsight construction using the ranges of the claim. This is improper.

Therefore, it is respectfully submitted that this rejection is improper, and Claim 16 is patentable. Accordingly it is respectfully requested that this rejection be withdrawn.

Claims 17-18

The Examiner also rejects Claims 17-18 under 35 USC §103(a) as being unpatentable over

Japanese Patent Specification No. 63-086791. This rejection is also respectfully traversed.

Japanese Patent Specification No. 63-086791 describes a non-freezing material consisting of urea, CaCl₂ and MgCl₂. In Table 1 cited by the Examiner in the Office Action, O signifies not frozen, X signifies frozen, and Δ signifies a small amount of ice on the surface. As O signifies not-frozen, the freezing point is unknown. Further, one skilled in the art would know that this example does not show an obvious freezing point, as it includes urea which is an impurity. The compound is not a simple mixture of MgCl₂ and CaCl₂.

In the examples (16-26 in Table 1) listing X, which signifies frozen, the major components are less than 12%, and the remaining components are greater than or equal to ½ of the major components. These compounds froze at a temperature of -20°C, which is very different and very far from the melting point range of between -34 and -40°C of Claim 17. This difference is because the proportion of the mixture in JP '791 is not the most appropriate. The influence of urea in this example makes it impossible to predict at what mixture and at what temperature the mixture reaches clear freezing points.

Further, in example 4 of the specification of the present application, the concentration of MgCl₂ is $\geq 15\%$ (See Table 2). Accordingly, Applicant is changing the "10-25%" to "15-25%" (which is clearly supported by the present application). Applicant respectfully submits this while the freezing point of a single component may already have been described in various documents, there are no previous documents known to Applicant describing a binary salt mixture that lowers the freezing point through the addition of a small amount of CaCl₂ to -34 and -40°C, which is extremely low, as in the claimed invention.

Therefore, it is respectfully requested that this rejection be withdrawn.

Conclusion

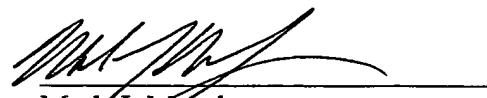
Accordingly, it is respectfully submitted that the present application is in a condition for allowance and should be allowed.

If any fee should be due for this amendment, please charge our deposit account 50/1039.

Favorable reconsideration is earnestly solicited.

Respectfully submitted,

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